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## EFFECT OF THE YOGIC EXERCISES ON PHYSICAL FITNESS COMPONENTS

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### Abstract:

*The purpose of the study was to find out the effects of yogic exercises on Agility, abdominal strength and flexibility test of middle school children.*

*The subjects were to randomly selected from 7<sup>th</sup> 8<sup>th</sup> and 9<sup>th</sup> classes of Bhagwandas Purohit Vidya Mandir, Nagpur. The data was collected before and after six weeks of experimental period. The subjects were given shuttle run test for Agility, sit-ups test for abdominal strength and sit and Reach test for flexibility before and after six weeks of experimental period. The subjects were divided randomly into two groups A and B. Each group consisted of 25 subjects.*

*Group A underwent a programme of selected yogic exercises were as group B was control group. Group A followed there programme of instruction for a period of six weeks. Training was carried out for there days per weeks.*

*Mean difference of all the two groups A and B were tested for significance of difference by 't' test. In group A the mean gain in all the three variables were founded statistically significance at .05 level of confidence.*

### KEYWORDS:

Yogic Exercises , Physical Fitness , Abdominal Strength , Statistically.

### INTRODUCTION:

Fitness for effective living has many interdependent components involving intellectual, emotional and physical, Fitness rests upon solid foundation of health, Fitness for effective living implies freedom for diseases. Enough strength agility endurance and skill to meet the demand of daily living and sufficient reserve to with stand stresses and strain. Optimum fitness permits a person to enjoy life to the fullest. In addition to the days routine work, one should still have enough vitality to enjoy vocational interest and to meet special challenges that may interrupt the daily routine. The possession of physical strength, agility, flexibility and endurance may enable the individual or group to survive, whereas the lack of fitness may spell catastrophe. Though hereditary factors play on important role in fitness but the development of physical bracathlessness general weakness, muscular discomfort evokes reduction or cessation of activity. It is seen that the untrained individual reduces or discontinues his performance long before physiological limits are reached. The untrained person can increase his tolerance for exercise by following a regular session, but under ordinary circumstances he still will not approach his physiological limit of activity. Repeated period of intensive exercise alternating with light exercise of rest enable. The well trained person to overcome these inhibitions and experiences the phenomenon known as “ second wind ” Second wind in thus defined as adjustment of the body which temporarily banishes fatigue and enables, the individual to continue his acitivity with renewed vigour. Exercise which regularly approaches physiological limits coupled with adequate rest results in the development of increased strength and endurance, exercise carried into state of exhaustion mat to harm particularly to the unconditional

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individual. This is specially likely to happen if there is insufficient time for recovery after fatigue.

The greatest effect of physical and yogic is the improved organization of the body functions which support activity. This improved physiological efficiency is reflected in increased endurance, strength and agility.

The ability of the heart and circulatory system to supply blood to the body more often improves muscle tone of the heart, an increased output of the blood per minute and an increase in the number of active capillaries in the lungs. Exercise improves the works of the lungs by increasing their ability to expand more fully, to take more air and to utilize a greater proportion of the oxygen in the inspired air. Games and sports involving extended running, vigorous swimming and dancing serve this purpose. The nervous system can adopt itself to permit proficiency in a almost unlimited variety of physical activities. With practice and training many complex movement patterns become second nature and almost automatic.

An individual's ultimate performance is limited by the physiological capacity of the body system involved. Subjective factors such as feelings of climbing, jumping and speed running tend to increase muscular strength.

Today's children will be tomorrow's leaders and scientists. Yet children are still struggling to have their need fulfilled. Because children are our future and our most precious resources, the quality of tomorrow's world perhaps even its survival, will be determined by well-being, safety and development of today's children. Remedies for many of the shortcomings of health services are known and available but the same cannot be usefully applied unless the overall concept of the health is appropriately modified. The main need of today's is to develop systems through which effective health care can be made both accessible and acceptable to the people. In this regard yoga may play a very important role.

The yogic exercise is becoming very popular throughout the world.

#### **METHODOLOGY :-**

To conduct the following methodological steps have been taken into consideration.

##### **Sample –**

Fifty male and female students from six, seventh and eighth standard of Bhartiya Vidya Bhavan, Nagpur, were selected as the subjects for the study. The sample was selected by following random selection method.

All the subjects were required to undergo through a medical examination and were found to be fit for the required experiment.

The subjects were divided into two groups. ( i.e. Group A, and Group B ) includes 25 in A and 25 subjects in Group B.

##### **Criterion Measure**

The shuttle run test, the well sit and reach test and setup test were taken as a criterion measure for the purpose of the study. The tests were taken before and after the completion of the experimental period of six weeks.

##### **Procedure for Experimental treatment.**

A selection of nice asanas was made from among a number of asanas recommended for children in the book of Yoga Asanas by Swami Kaivalyanand, on the basis of that all part of the body should be involved in performing asanas.

**Table 1.**  
**PROGRESSION OF YOGIC EXERCISES OVER A PERIOD OF SIX WEEKS,**

Asana		Duration per week		
		1 <sup>st</sup> and 2 <sup>nd</sup>	3 <sup>rd</sup> and 4 <sup>th</sup>	5 <sup>th</sup> and 6 <sup>th</sup>
1	Sarvangasan	5	10	15
2	Halasana	3	05	07
3	Bhujangasan	5	10	15
4	Dhanurasana	5	07	10
5	Vakrasana	3	05	10
6	Pascimatanasana	3	05	07
7	Matsyasana	3	05	07
8	Ardha Navasana	3	05	07
9	Shalabhasana	3	05	05

#### Experimental design

Fifty subjects were selected randomly, the subjects for the each of the groups consisting 25 each were assigned randomly. Scores on three selected variables were obtained before and after the experimental period of six weeks.  
(Appendices A1A2A3 B1B2B3) Training in asanas was administered to group A and group B was control group.

#### Statistical Analysis

The difference in the mean gain of each group for selected variable was tested for significance of difference by “t” test.

The difference of initial and final scores was taken into account the level of significance was set at.05 level of confidence.

#### Analysis of data

The statistical analysis of the data ( shuttle run for agility, sit-ups for abdominal strength and sit-and Reach test for flexibility) Collected on 25 subjects of group A and 25 controlled subject of group B is presented in this chapter the initial and final scores are presented in the (Appendices A1A2A3 B1B2B3)

#### Scoring of Date

The subject score on agility, abdominal strength tests given before and after the completion of experimental period constituted the score for the purpose of the study.

**TABLE-2.**  
**RELIABILITY OF TEST SCORE FOR TESTING AGILITY, ABDOMINAL STRENGTH AND FLEXIBILITY**

Test Items	Coefficient of Correlation 'r'
Agility	0.83
Abdominal Strength	0.75
Flexibility	0.99

#### Level of Confidence

For testing the difference between the mean gains of two groups the level of confidence was set at .05 level.

#### Finding

The initial mean value in the case of shuttle run test group respectively. The final mean value of shuttle run test group A and B were 35.95 and 35.96 respectively at the conclusion of six weeks of experimental period. Thus the resultant decreases in means of group A and B were 1.54 and 0.73 respectively in group it was found statistically significant at 't' test for significance of difference between two means. The 't' value of obtained in respect of group A was 3.66 and with respect to group B it was 1.38 and for the mean difference to be significant at .05 level of confidence the 't' value to be obtained should be 2.06.

This shows that the mean gains (timings) can be decrease significantly by administering a program of yogic exercises. In other words Agility can be improve by taking part in yogic exercises. The mean gains of group A and B presented a table number 3.

**TABLE-3.**  
**GROUP MEAN DECREASES IN SHUTTLE RUN SCORE AFTER SIX WEEKS OF TRAINING.**

Group	M1	M2	d	SE	't'ratio
A	37.52	35.98	1.54	0.42	3.66
B	37.69	36.96	0.73	0.53	1.38

**TABLE-4.**  
**GROUP MEAN DECREASES IN SIT-AND REACH TEST SCORE AFTER SIX WEEKS OF TRAINING.**

Group	M1	M2	d	SE	't'ratio
A	13.9	17.64	3.74	1.05	3.56
B	14.41	15.52	1.11	1.29	0.86

#### DISCUSSION OF FINDINGS

From the analysis of data it was evident that means of group A shows decreases in shuttle run test. It showed increase in the sit-ups test and sit well reach test as result of administration yogic exercises all these changes in variable was found to be statistically significant at .05 level of confidence.

Depending upon the statistically analysis data the null hypothesis is expected.

### CONCLUSION

In the light of the result of this study following conclusion can be drawn.

1. Agility can be improved by taking part in yogic exercises.
2. Abdominal strength can be improved by taking part in yogic exercise.
3. Flexibility can be improved by taking part in yogic exercise.

### RECOMMENDATIONS

1. Study may be repeated using subjects belonging to different age group and sex other than those employed in this study.
2. Similar studies can be carried out for longer durations and on different variables.

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